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# NORTHEASTERN RESEARCH NOTES



NORTHEASTERN FOREST EXPERIMENT STATION

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## *RELATIVE EASE OF PEELING*

### *BEECH, RED MAPLE, & YELLOW BIRCH*

Rough hardwood is often difficult to market as pulpwood, but peeled wood finds readier markets and also brings a higher price. To determine the relative ease of peeling beech, red maple, and yellow birch, a study was made at the Paul Smith Experimental Forest in the Adirondacks of New York.

Common woods practice is to peel the entire bole in one piece and then cut it into 4-foot bolts. In this study, however, the wood was peeled in 4-foot bolts to eliminate the effects of such variables as clear bole length, roughness of bole, and lay of the tree.

The study was made at the peak of the peeling season. All wood used was peeled within 4 hours of felling.

In peeling, the bolt was leaned against a notched log, which served as a simple peeling rack. Bark was removed with a short-handled (16-inch) hemlock spud.

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| Species      | Bolts peeled  | Average diameter outside bark | Time per bolt    |
|--------------|---------------|-------------------------------|------------------|
|              | <u>Number</u> | <u>Inches</u>                 | <u>Min.:Sec.</u> |
| Beech        | 15            | 8.58                          | 3 : 24.7         |
| Red maple    | 14            | 7.06                          | 1 : 33.7         |
| Yellow birch | 32            | 6.60                          | 1 : 11.1         |

Yellow birch peeled most easily. Its bark was stiff and thick, and it loosened in sheets. Red maple also peeled easily. Its bark was tough, and it separated from the wood in long flexible strips.

Beech was the most difficult to peel. Its bark was thin and brittle, and it came off in narrow strips. Beech bark sets to the wood rapidly: one day in the sun dries out the cambium and cements the bark to the wood.

Yellow birch and red maple were certainly as easy to peel as either spruce or fir. And, in addition, peeling them was clean-work--no pitch or resin to gum up tools, hands, and clothes.

--WILLIAM RUTHERFORD, JR.

(Mr. Rutherford, formerly a member of the Northeastern Forest Experiment Station's Adirondack Research Center, is now head of the Forestry Department at Paul Smiths College, Paul Smiths, N. Y.)

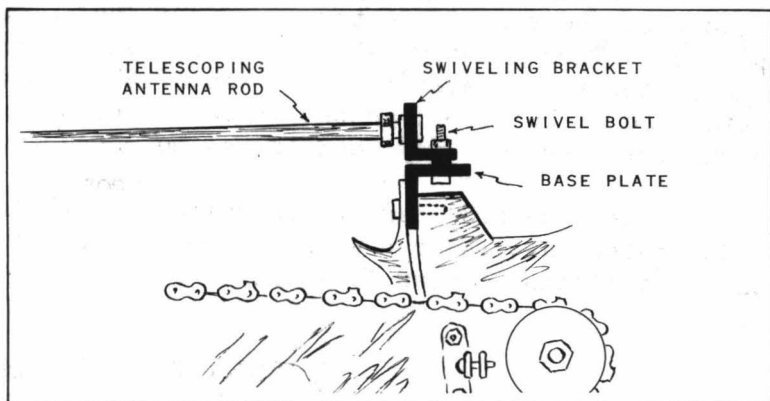
## SIMPLE MEASURING DEVICE SPEEDS PULPWOOD CUTTING

A simple measuring rod, easily attached to a chain saw, permits pulpwood cutters to measure bolt lengths and buck the tree into bolts in one operation. By eliminating the separate jobs of measuring and marking, it saves as much as 20 minutes per cord in production time.

This device, made at the Experiment Station's research center at Beltsville, Md., employs a car-radio antenna. These can be picked up at any auto junkyard. They are fairly stiff and can be telescoped from about 2 feet to 5 feet.

The antenna rod is attached to the saw by a simple swiveling bracket, without any alteration to the saw.

The bracket is made of 2 pieces of  $1\frac{1}{2}$ -inch angle iron  $\frac{3}{16}$  inch thick. In this case (for use with a 1-man Homelite saw), a piece 2 inches



long is bolted to the bumper shoe of the saw, to form a base plate. Another piece, 1 inch long, with the antenna rod bolted to it, is attached to the base plate with a swivel bolt.

The bolt holes are alined so the measuring rod lies directly over the saw chain. Equally simple attachment brackets can be made for other makes of chain saws.

Mounted this way, the measuring rod can be swung horizontally 90 degrees to either right or left of the saw bar; or it can be swung straight ahead over the saw bar. In this position, telescoped, the saw can be used for felling without removing the measuring rod. Also, in this position the rod is out of the way when carrying the saw through brush.

This measuring rod attachment is believed to be an improvement over the "Sam Day measuring rod attachment" described in the American Pulpwood Association's Equipment Handbook Release No. 111, April 1952.

To use the measuring rod, the operator positions the saw so the tip of the rod lies just even with the end of the tree. There he makes his cut. Then he moves along the tree until the tip of the rod is even with the end of the first cut, and he bucks off another bolt. He moves along the tree this way, cutting as he measures.

Since the rod can be swiveled to either side of the saw, he can work along the tree in either direction or saw from either side.

--RICHARD H. FENTON